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EXAMINER	
ABEDIN, SHANTO	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/680,530	**Applicant(s)** DRYER, JOSEPH ERNEST	
	Examiner SHANTO M Z ABEDIN	**Art Unit** 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 14-17* is/are rejected.

7)☒ Claim(s) *12 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the communication filed on 12/20/2007.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). In particular, claim 7 was missing in original submission filed on 10/07/2003, therefore, claim 7 should not be withdrawn or cancelled, rather misnumbered claims 8-18 should have been renumbered as claims 7-17 accordingly. Therefore, **misnumbered claims 8-18 been renumbered as claims 7-17 accordingly. The applicant is suggested to submit a clean copy of the claim set reflecting the renumbering.**

3. (Renumbered) claims 1-17 have been presented for examination.

4. (Renumbered) claims 12-13 are objected.

5. (Renumbered) claims 1-11 and 14-17 have been rejected.

Response to Arguments

6. The applicant FAILED to response to previous OBJECTIONS TO CLAIMS: The examiner notes, the applicant failed to response to the previously issued (on 11/01/2007) objections to claims. Since neither any arguments in response to the objections to claims were submitted nor any amendments to claims was made to correct the objected issues, the previously sent objections to claims are maintained (please see below for detail). Furthermore, upon further examination, new grounds of objections to claims are found, and presented in this office action.

7. IMPROPER FORMAT, and SUBMISSION: The applicant should submit an argument under the heading “Remarks” pointing out disagreements with the examiner’s contentions. Applicant must also discuss the references applied against the claims, explaining how the claims avoid the references or distinguish from them. Furthermore, such arguments/ remarks should be submitted as a single document separately from the claims.

8. SPURIOUS ARGUMENTS: Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

In particular, regarding the previous 35 USC 102(e) type rejections, the applicant merely discussed/ remarked on what the differences between the reference Petrogiannis’632 and the claimed invention (such as differences between a data authentication code and a digital signature, etc.), however, failed to state concisely what claimed limitations Petrogiannis’632 actually does not teach. However, for the sake of the timely prosecution of this case, as best understood, the applicant’s remarks are considered.

Moreover, in response to the applicant’s later remark that digital signature verification of linked multiple documents with no reference to the authentication of reproduction is found contradictory since by definition a digital signature of an electronic document is normally generated by performing cryptographic operations on the content of the document, and normally a content hash or authentication code is involved to generate such digital signature, therefore, a digital signature of a subdocument can be associated with the authentication of reproduction of subdocuments, or a data/ document authentication code. More importantly, why would any one use a document digital signature if it does not facilitate any authentication?

Finally, claimed limitations fails to disclose that subdocuments are not the reproductions of a master document, or that each subdocument is different from the cover document, and any other subdocument. Therefore, a subdocument can be interpreted as copy of a master document, or another subdocument.

9. Regarding the previous 35 USC 103(a) type rejections, the applicant merely discussed/ remarked on what the differences between the reference Petrogiannis'632 and the claimed invention (such as differences between Petrogiannis'632's approval signature and a digital signature) , however, failed to state concisely what claimed limitations Petrogiannis'632 actually does not teach . Only concise argument in regards to the claim limitations the applicant made was that Petrogiannis'632 failed to teach creation of a cover document and creation of subdocument (see page 12, remarks filed on).

In response to the above argument, the examiner respectfully disagrees since claimed limitations fails to disclose that subdocuments are not the reproductions of a master document, or that each subdocument is different from the cover document, and any other subdocument. Therefore, a subdocument can be interpreted as copy of a master document, or another subdocument.

10. As best understood, the applicant's other remarks regarding previous 35 USC 102 (e) and 35 USC 103 (a) type rejections are fully considered, however, such remarks/ arguments are now moot in view of new grounds of rejections presented in this office action.

Claim Objections

11. Renumbered claim 7 is objected to because of the following informalities: claim should end with a period (.), instead it is ending with an inappropriate word 'and'. Appropriate correction is required. See MPEP 608.01 (m) JR-3].

12. Renumbered claims 12, 16 and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. In particular while independent claim 16 (renumbered as claim 15) directed to a method for allowing comments in a cover document, on the contrary, renumbered dependent claims 16 and 17 are directed to a different invention, or a system/ means for providing in the cover document a particular method. Furthermore, claim 12 is directed to means for providing signature generation/ transmission which is different from what claimed (a method of creating subdocuments and approval signatures) in the independent claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

13. Renumbered claims 1-17 are objected to because the lines are crowded too closely together, making reading difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b). Furthermore, claims should follow the format of the original submission (filed on 10/07/2003) for clarity and readability.

14. Renumbered claims 15-17 are objected to because the claims are generally narrative and indefinite, and replete with grammatical and idiomatic errors that might raise future 35 USC 112

type rejection issues. Claims 15-17 are directed to a method of allowing comments in a cover document, however, it is not clear what the metes and bounds of an inner claimed method of inserting. Since a method can be comprised of one or more steps, it is not clear what exactly the applicant is trying to claim by such inner method.

15. Claim 7 is objected to because claim 7 was missing in original submission filed on 10/07/2003, therefore, claim 7 should not be withdrawn or cancelled, rather misnumbered claims 8-18 should have been renumbered as claims 7-17 accordingly. The applicant is suggested to submit a new set of claims reflecting renumbering of the claims in a single/ separate document with the header 'claims'.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. (Renumbered) Claims 1, 3, 7, 8 and 10 are rejected under 35 USC 103 (a) as being unpatentable over Petrogiannis (US 6751632B1; hereinafter Petrogiannis'632) in view of Dryer et al (US 2002/0099666A1; hereinafter Dryer'666)

Regarding claim 1, Petrogiannis'632 teaches a method of controlling the digital signature process to allow controlled creation, modification, signature generation and signature verification of multiple subdocuments within a single cover document, comprising the steps of: creating a protected cover document for the creation, display and editing of one or more said subdocuments within that document and for controlling through the cover document access to one or more said subdocuments within that cover document for creation, editing, signature generation or signature verification (Col 3, line 9 to Col 4, line 64; master document to create, convert and verify reproduced documents and their DACs) ; creating through a menu associated with the cover document an access to one or more said subdocuments within that cover document for edit and display of said subdocument in that cover document; creating through a menu associated with that cover document the transmission of said subdocument within that cover document object to a signature-generation program to allow creation of a digital signature (Col 3, line 9 to Col 4, line 64; creation of DACs and approval information) for each said subdocument within that cover document and for the verification of that digital signature; and providing in that cover document a display and/or storage of any digital signature created for said subdocument within that cover document, together with the information required or useful to use the digital signature (Col 3, line 9 to Col 4, line 64; each linked documents having own data authentication code as document signature or approval information; verifying DACs/ audit trails or approval information).

Petrogiannis'632 teaches a Data Authentication Code (DAC) that can be interpreted as digital signature of an electronic document since a digital signature is normally generated by utilizing cryptographic operations such as hash on document content.

However, in the case, position for inherency of "digital signature" is not found supportable, the examiner notes, newly cited reference Dryer'666 teaches generating and embedding such digital signatures in the documents/ files (Fig 5; Summery of the invention; Paragraph 0025). Dryer'666 further teaches creation of subdocuments, signing subdocuments, and modifying/ editing subdocuments (Fig 5; Summery of the invention; Paragraph 0025)

Dryer'666 and Petrogiannis'632 are analogous art because they are from the same field of endeavor of electronic signature management. At the time of invention, it would be obvious to a person of ordinary skill in art to combine the teaching of Dryer'666 with Petrogiannis'632 to design a method further comprising the step of utilizing a digital signature in order to provide a well known alternative authentication mechanism.

Regarding claim 3, Petrogiannis'632 teaches a method according to claim 1, wherein said creating a protected cover document for the creation, display and editing of the said subdocuments and for controlling through the cover document access to ~ said subdocuments for creation, editing, signature generation or signature verification comprises the steps of: creating as a cover document a protected database with fields representing the content of said subdocuments together with any associated digital signatures and information; and providing through a database management program access to said database fields to allow in a controlled manner editing of said subdocument fields; and providing through a database management program a user view of the contents of said database fields (Col 2, line 62 to Col 3, line 8; linked storage system storing DAC, revision, approval information).

Regarding claim 7, Petrogiannis'632 teaches method according to claim 1, wherein said creating through a menu associated with the cover document the transmission of a subdocument object to a signature-generation program to allow creation of a digital signature for each subdocument and for the verification of that digital signature comprises the steps of: creating a temporary or permanent subdocument object by embedding an object in the cover document or creating a separate document; copying the contents of said subdocument into the subdocument object; obtaining from the user identifying information; transmitting said subdocument object and the identifying information to an external signature-generation program for the generation of a digital signature; placing the digital signature and any applicable identifying information in the cover document in text, hidden text, or an embedded object, or a combination of these media (Col 3, line 1 to Col 4, line 4; embedded information/ DAC)

Regarding claim 8, Petrogiannis'632 teaches method according to claim I, further comprising the step of formatting the cover document suitable for printing in the final form and formatting the contained subdocuments and signatures for data parsing (Col 3, lines 1-7; Col 3 line 44 to Col 4, line 15; formatting).

Regarding claim 10, Petrogiannis'632 teaches method according to claim 1, further comprising the step of maintaining within the cover document or as a separate file under the control of the cover document control program an audit file containing a record of signature generation attempts, signature generation failures, and digital signature generation deletions involved with digital signature generation through the cover document (Col 3, line 1 to Col 3, line 59; storing approval information; linking to new document or new DAC).

17. (Renumbered) Claims 15-17 are rejected under 35 USC 103 (a) as being unpatentable over Petrogiannis (US 6912660 B1; hereinafter Petrogiannis'660) in view of Dryer et al (US 2002/0099666A1; hereinafter Dryer'666)

Regarding claim 15, Petrogiannis'660 teaches method of allowing comments in a cover document, comprising the steps of: providing in the cover document a method of inserting comment objects; and providing in the transmission of a subdocument object to a signature-generation program in the creation or verification of a subdocument digital signature that any reference to the comments objects be deleted prior to the transmission to the signature-generation program (Col 7, line 60 to Col 9, line 30; claims 14-25; embedding approval signature information; merging linking documents' DAC's to master documents; linking to new/ modified section of the master document).

Petrogiannis'660 teaches a Data Authentication Code (DAC) that can be interpreted as digital signature of an electronic document since a digital signature is normally generated by utilizing cryptographic operations such as hash on document content. However, in the case, position for inherency of "digital signature" is not found supportable, the examiner notes, newly cited reference Dryer'666 teaches generating and embedding such digital signatures in the documents/ files (Fig 5; Summery of the invention; Paragraph 0025).

Dryer'666 and Petrogiannis'660 are analogous art because they are from the same field of endeavor of electronic signature management. At the time of invention, it would be obvious to a person of ordinary skill in art to combine the teaching of Dryer'666 with Petrogiannis'660 to design a method further comprising the step of utilizing a digital signature in order to provide a well known alternative authentication mechanism.

Regarding claim 16, Petrogiannis'660 teaches wherein the inserting comment object comprises the insertion into the cover document of a link to a comment object (Col 7, line 60 to Col 9, line 30; claims 14-25; linking to new/ modified section of the master document).

Regarding claim 17, it recites the limitations of claims 15 and 16, therefore, it is rejected applying as above rejecting claims 15-16.

18. (Renumbered) Claims 2, 4-6, 9, 11 and 14 are rejected under 35 USC 103 (a) as being unpatentable over Petrogiannis (US 6751632B1; hereinafter Petrogiannis'632) in view of Petrogiannis (US 6912660 B1; hereinafter Petrogiannis'660) further in view of Dryer et al (US 2002/0099666A1; hereinafter Dryer'666)

Regarding claims 11, Petrogiannis'632 teaches a method of creating a hierarchy of subdocuments and approval signatures, comprising the steps of: creating a protected cover document for the creation, display and editing of the composite subdocuments and for controlling through the cover document access to the subdocuments for creation, editing, signature generation or signature verification; creating through a menu associated with the cover document the ability to access and edit a representation of the subdocument object that is then transferred to a visible, protected display in the cover document; creating through a menu associated with the cover document a means for the transmission of a subdocument to a signature-generation program to allow creation of a digital signature for each subdocument and for the verification of that digital signature; providing through a menu associated with the cover document a display and/or storage of any digital signature created for a subdocument, together with the information required or useful to use the digital signature (Col 3, line 1 to Col 4, line 67; creating, embedding, and converting new documents and new DAC for each linking documents); providing through a menu associated with the cover document the generation of an approval for an approval range of the cover document including one or more subdocuments, any associated digital signatures and accompanying signature information, or other approval; and providing in the cover document a display and/or storage of any approval, together with the information required or useful to use the approval (Col 3, line 1 to Col 4, line 6; approval; approved/ desired formats)

Petrogiannis'632 fails to teach an approval signature; and providing protection to the integrity of the approval by either preventing the editing of subdocuments within the approval range for a signed approval or destroying any approval whose approval range includes an edited subdocument.

However, Petrogiannis'632 teaches a Data Authentication Code (DAC) that can be interpreted as digital signature of an electronic document since a digital signature is normally generated by utilizing cryptographic operations such as hash on document content. Petrogiannis'660 further teaches an approval signature; and providing protection to the integrity of the approval by either preventing the editing of subdocuments within the approval range for a signed approval (Col 7, line 60 to Col 9, line 30; claims 14-25; approval signature; format).

However, in the case, position for inherency of "digital signature" is not found supportable, the examiner notes, newly cited reference Dryer'666 teaches generating and embedding such digital signatures in the documents/ files (Fig 5; Summery of the invention; Paragraph 0025). Dryer'666 further teaches creation of subdocuments, signing subdocuments, and modifying/ editing subdocuments (Fig 5; Summery of the invention; Paragraph 0025).

Dryer'666, Petrogiannis'660 and Petrogiannis'632 are analogous art because they are from the same field of endeavor of electronic signature management. At the time of invention, it would be obvious to a person of ordinary skill in art to combine the teaching of Dryer'666 or Petrogiannis'660 with Petrogiannis'632 to design a method further comprising the step of creating a document digital signature, and providing protection to the integrity of the approval by either preventing the editing of subdocuments within the approval range for a signed approval in order to provide further signature security.

Regarding claim 2, Petrogiannis'632 teaches a method wherein said creating a protected cover document for the creation, display and editing of the said subdocuments and for controlling through the cover document access to said subdocuments for creation, editing, signature generation or signature verification comprises the steps of: creating a protected document as a cover document, creating within the cover document a reserved area or areas for each subsequently created subdocument; providing for the creation of a subdocument object for each subsequently created subdocument by embedding an object in the cover document or creating a separate document; providing for the copying the contents of said subdocument into the subdocument object; opening said subdocument object for edit (Col 3, line 1 to Col 4, line 67; creating, embedding, and converting new documents and new DAC for each linking documents)

Petrogiannis'632 fails to teach after editing, transferring the contents of said subdocument object into the subdocument area in the cover document and destroying said subdocument object.

However, Petrogiannis'660 teaches teach after editing, transferring the contents of said subdocument object into the subdocument area in the cover document and destroying said subdocument object (Col 7, line 60 to Col 9, line 30; claims 14-25; merging linking documents' DAC's to master documents; linking to new/ modified section of the master document).

Petrogiannis'660 and Petrogiannis'632 are analogous art because they are from the same field of endeavor of electronic signature management. At the time of invention, it would be obvious to a person of ordinary skill in art to combine the teaching of Petrogiannis'660 with Petrogiannis'632 to design a method wherein after editing, transferring the contents of said subdocument object into the subdocument area in the cover document and destroying said subdocument object in order to provide an alternative data security mechanism.

Regarding claims 4-6, they recite the limitations of claims 1-3, therefore, they are rejected applying as above rejecting claims 1-3.

Regarding claim 9, Petrogiannis'632 fails to teach method further comprising the step of verifying the user identity utilized for the generation of digital signatures by requiring the simultaneous reading of physical tokens or user characteristics, such as RFID keys, proximity cards, biometric readers, "smart cards", and other unique personal identification means.

However, Petrogiannis'660 teaches the step of verifying the user identity utilized for the generation of digital signatures by requiring the simultaneous reading of physical tokens or user characteristics, such as RFID keys, proximity cards, biometric readers, "smart cards", and other unique personal identification means (Col 3, starting at line 15; Col 7, line 60 to Col 9, line 30; Claims 5-13,19; user specific data).

Regarding claim 14, it recites the limitations of claims 9 and 11, therefore, it is rejected applying as above rejecting claims 9 and 11.

Allowable Subject Matter

19. Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Moreover, regarding claim 12, it is also objected as being of improper dependent form for failing to further limit the subject matter of a previous claim (See Paragraph 12 of this office action), therefore, claim 12 needs to overcome the existing objections to it before placing itself in condition for allowance.

Conclusion

20. A shortened statutory period for response to this action is set to expire in 3 (Three) months and 0 (Zero) days from the mailing date of this letter. Failure to respond within the period for response will result in ABANDOMENT of the application (see 35 U.S.C 133, M.P.E.P 710.02(b)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shanto M Abedin whose telephone number is 571-272-3551. The examiner can normally be reached on M-F from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moazzami Nasser, can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306, or the RightFax number for the examiner is 571-273-3551.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shanto M Z Abedin

Examiner, AU 2136

/Nasser G Moazzami/

Supervisory Patent Examiner, Art Unit 2136